

APPENDIX A - CLAIM AMENDMENTS

Serial No.: 09/911,551

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1. (Currently Amended) A device for occluding a reproductive body lumen or passageway, comprising:
 - a) a tubular member having a first end and a second end with at least one of the ends being open, a lumen extending therein to at least one open end, said tubular member at least in part radially expandable within the reproductive body lumen from a first configuration with a first transverse dimension to a second configuration with a second transverse dimension greater than the first transverse dimension, said tubular member including an open-framework structure that allows said tubular member to be secured to a wall of the reproductive body lumen; and
 - b) a fibrous mesh member longitudinally disposed within the lumen of the tubular member, said fibrous mesh member being permeable to allow for ~~epithelial~~ tissue ingrowth from the wall of the reproductive body lumen into the fibrous mesh member in order to occlude the body lumen.
2. (Previously Presented) The device of claim 1 wherein the fibrous mesh member comprises woven strands of a biocompatible material connected to the tubular member.
3. (Previously Presented) The device of claim 1 wherein the fibrous mesh member comprises bundled strands of a biocompatible material connected to the tubular member.
4. (Previously Presented) The device of claim 1 wherein the fibrous mesh member is formed from a material selected from the group consisting of nylon, dacron, metal, polymeric material, and animal tissue.
5. (Previously Presented) The device of claim 1 wherein the fibrous mesh member is further longitudinally disposed along at least a section of an outer surface of the tubular member.

6. (Previously Presented) The device of claim 5 wherein the fibrous mesh member is longitudinally disposed along substantially the entire length of the outer surface of the tubular member.
7. (Previously Presented) The device of claim 1 wherein the fibrous mesh member is disposed within the lumen of the tubular member along substantially the entire length of the lumen of the tubular member.
8. (Previously Presented) The device of claim 1 wherein the fibrous mesh member is disposed within the lumen of the tubular member in a plurality of sections intermittently spaced along the length of the tubular member.
9. (Previously Presented) The device of claim 1 wherein the fibrous mesh member is disposed within the lumen of the tubular member at the first end of the tubular member.
10. (Previously Presented) The device of claim 9 wherein the fibrous mesh member is further disposed along at least a section of an outer surface of the tubular member.
11. (Previously Presented) The device of claim 1 wherein the tubular member is formed at least in part of a material selected from the group consisting of stainless steel, superelastic material, shape memory material, rigid plastics, semirigid plastics, metal, NiTi, tantalum, platinum, and gold.
12. (Previously Presented) The device of claim 1 wherein the tubular member further includes anchoring members configured to secure the expanded tubular member to the wall of the reproductive body lumen.
13. (Cancelled)
14. (Cancelled)
15. (Previously Presented) The device of claim 9 wherein the second configuration of the tubular member has a radially expanded diameter which increases along at least a section thereof from the first end of the tubular member to the second end of the tubular member.

16. (Previously Presented) The device of claim 1 wherein the open-framework structure of the tubular member is a lattice-like framework.
17. (Previously Presented) The device of claim 16 wherein the lattice-like framework comprises a thin walled metallic tube having a pattern of cuts configured to allow the tubular member to be expanded to the second configuration.
18. (Original) The device of claim 16 wherein the lattice-like framework comprises a braid of wire.
19. (Original) The device of claim 16 wherein the lattice-like framework comprises a helical coil of wire.
20. (Currently Amended) The device of claim 1 wherein a surface of the tubular member is configured to promote ~~epithelialization~~ tissue ingrowth.
21. (Previously Presented) The device of claim 20 wherein said surface is coated at least in part with a compound to promote tissue cell growth.
22. (Original) The device of claim 1 further comprising a material capable of provoking an inflammatory response.
23. (Original) The device of claim 22 wherein the inflammatory material comprises copper or copper alloy.
24. (Original) The device of claim 22 wherein the inflammatory material comprises a radioactive material.
25. (Cancelled)
26. (Previously Presented) The device of claim 1 further including a plug releasably secured to the fibrous mesh member.
27. (Original) The device of claim 26 wherein the plug is formed at least in part of a material capable of provoking an inflammatory response.

28. (Currently Amended) A contraceptive or sterilization device for occluding a reproductive body lumen, comprising:

- a) a tubular member which has a first end and a second end, with at least one end being open, and a lumen extending therein to the open end, and which is at least in part radially expandable within the reproductive body lumen from a first configuration to a second larger configuration, said tubular member including an open-framework structure that allows said tubular member to be secured to a body wall of the reproductive body lumen by ~~epithelial~~-tissue ingrowth through and around said open-framework structure; and
- b) a mesh member disposed within the tubular member, which is permeable to allow for ~~epithelial~~-tissue ingrowth from the wall of the reproductive body lumen to thereby permanently occlude the reproductive body lumen.

29. (Currently Amended) A contraceptive device installed within a lumen of the patient's reproductive system, comprising:

- a) a tubular member which has a first end and a second end, with at least one of the ends being open, and a lumen extending therein, and which has at least a portion thereof secured by tissue ingrowth ~~epithelialization~~ to a body wall portion defining at least in part the lumen of the patient's reproductive system; and
- b) an occluding member disposed within the tubular member comprising ~~an epithelialized-mesh~~ penetrated by further tissue ingrowth which ~~further~~ occludes the lumen of the patient's reproductive system to prevent the passage of reproductive cells therethrough.

30. (Currently Amended) The installed contraceptive device of the claim 29 wherein the tubular member is ~~epithelialized~~-contains tissue ingrowth along at least a length thereof.

31. (Currently Amended) A contraceptive system, comprising:

- a) a catheter having a proximal end, a distal end, and a lumen extending at least in part therein; and

b) a contraceptive device releasably connected to the catheter, having a tubular member which has a first end and a second end with at least one of the ends being open, and a lumen extending therein to the at least one open end, which is at least in part radially expandable within a reproductive body lumen from a first configuration to a second configuration with larger transverse dimensions, said tubular member including a lattice-like framework that promotes ~~epithelialization~~ tissue ingrowth thereinto to secure said tubular member to a wall of the reproductive lumen, and which has a mesh member disposed within the tubular member, that is permeable to allow for ~~epithelial~~ tissue ingrowth from the wall of the reproductive lumen into the mesh member to thereby occlude the reproductive body lumen and prevent the passage of reproductive cells through the reproductive lumen.

32. (Original) The contraceptive system of claim 31 including an expanding member on a distal section of the catheter to expand at least a portion of the tubular member.

33. (Currently Amended) A method of contraception comprising:

- a) inserting within a desired reproductive body lumen a contraceptive device comprising a tubular member with at least one open end, a lattice-work frame, and a mesh member connected thereto;
- b) radially expanding the tubular member within the body lumen;
- c) securing by ~~epithelialization~~ tissue ingrowth the radially expanded tubular member to a wall portion defining at least in part the reproductive body lumen; and
- d) further ~~epithelializing~~ promoting tissue ingrowth into the mesh member ~~by ingrowth of epithelial cells~~ from the wall portion of the reproductive body lumen to occlude the reproductive body lumen and prevent the passage of reproductive cells through the reproductive lumen.

34. (Cancelled)

35. (Previously Presented) The method of claim 34 wherein the contraceptive device further includes one or more connecting members on a surface of the tubular member, and wherein the

tubular member is further secured to the wall portion by embedding the connecting members in the wall portion.

36. (Previously Presented) The method of claim 33 wherein the contraceptive device is disposed on an expandable member of a delivery catheter, and wherein the tubular member is expanded by inflating the expandable member.

37. (Previously Presented) The method of claim 36 wherein the mesh member of the contraceptive device is transversely disposed within a lumen of the tubular member at a first end of the tubular member, wherein a distal end of the expandable member of the catheter is disposed in the tubular member lumen proximal to the mesh member, and the expandable member is inflated to expand the tubular member to a larger diameter increasing along at least a section of the tubular member from the second to the first end of the tubular member.

38. (Previously Presented) The method of claim 37 wherein at least the second end of the tubular member is radially expanded into contact with the wall portion of the body lumen.

39. (Previously Presented) The method of claim 38 wherein the expandable member is deflated and the delivery catheter is withdrawn from the body lumen.

40. (Cancelled)

41. (Previously Presented) The method of claim 36 wherein the contraceptive device is disposed within a lumen of a delivery catheter, and wherein a radially compressive force is released by longitudinally displacing the tubular member out a distal end of the delivery catheter.

42. (Currently Amended) The method of claim 33 wherein the expanded tubular member is disposed within the body lumen for sufficient time for it to be ~~epithelialized~~ penetrated by tissue ingrowth within the body lumen and thereby secured to the wall portion.

43. (Currently Amended) A contraceptive device for occluding a patient's reproductive body lumen or passageway, comprising:

- a) an elongated expansive member having a lattice-like open framework, said expansive member having a longitudinal axis which is at least in part configured to be

radially expanded about said longitudinal axis within a lumen of a patient's reproductive system from a first configuration to a second retained configuration having larger transverse dimensions than the first configuration to facilitate securing by epithelial tissue ingrowth a least a portion of the elongated expansive member to a wall portion defining at least in part the lumen or passageway of a patient's reproductive system; and

b) a ~~permeable~~-fibrous member which is secured to the elongated expansive member that allows for epithelial-tissue ingrowth from the wall portion defining at least in part the lumen of passageway of a patient's reproductive system to thereby occlude the patient's reproductive body lumen and prevent the passage of reproductive cells through the reproductive lumen.

44. (Previously Presented) The device of claim 43 wherein the mesh member comprises woven strands of a biocompatible material connected to the elongated expansive member.

45. (Previously Presented) The device of claim 43 wherein the mesh member comprises bundled strands of a biocompatible material connected to the elongated expansive member.

46. (Previously Presented) The device of claim 43 wherein the mesh member is formed from a material selected from the group consisting of Nylon, Dacron, metal, other polymeric material, and animal tissue.

47. (Previously Presented) The device of claim 43 further including a mesh layer longitudinally disposed along at least a section of the elongated expansive member.

48. (Previously Presented) The device of claim 47 wherein the mesh layer is longitudinally disposed along substantially the entire length of the elongated expansive member.

49. (Previously Presented) The device of claim 43 wherein the mesh member is disposed along substantially the entire length of the elongated expansive member.

50. (Previously Presented) The device of claim 43 wherein the mesh member is disposed on the elongated expansive member in a plurality of sections intermittently spaced along the length of the elongated expansive member.

51. (Previously Presented) The device of claim 43 wherein the mesh member is disposed at the first end of the elongated expansive member.
52. (Previously Presented) The device of claim 51 including a mesh layer longitudinally disposed along at least a section of the elongated expansive member.
53. (Previously Presented) The device of claim 43 wherein the elongated expansive member is formed of a material selected from the group consisting of stainless steel, superelastic material, shape memory material, rigid plastics, semirigid plastics, metal, NiTi, tantalum, platinum, and gold.
54. (Previously Presented) The device of claim 43 wherein the elongated expansive member further includes anchoring members configured to secure the expanded member to a wall defining the body lumen.
55. (Previously Presented) The device of claim 43 wherein the elongated expansive member expands from the first configuration to the second larger configuration by the release of a radially compressive force.
56. (Previously Presented) The device of claim 55 wherein the elongated expansive member comprises a superelastic material.
57. (Previously Presented) The device of claim 54 wherein the elongated expansive member second larger configuration comprises a radially expanded diameter increasing along at least a section thereof from the first end of the tubular member to the second end of the tubular member.
58. (Cancelled)
59. (Previously Presented) The device of claim 58 wherein the elongated expansive member in the first configuration is formed at least in part of a thin walled metallic tube having a pattern of cuts configured to allow the elongated expansive member to be expanded to the second configuration with a lattice-like framework.
60. (Previously Presented) The device of claim 58 wherein the lattice-like framework comprises a braid of wire.

61. (Previously Presented) The device of claim 58 wherein the lattice-like framework comprises a helical coil of wire.
62. (Currently Amended) The device of claim 43 wherein the surface of the elongated expansive member is configured to promote ~~epithelialization~~ tissue ingrowth.
63. (Previously Presented) The device of claim 43 coated at least in part with a compound to promote tissue cell growth.
64. (Previously Presented) The device of claim 43 further comprising a material capable of provoking an inflammatory response.
65. (Previously Presented) The device of claim 64 wherein the material promoting inflammatory response is copper or copper alloy.
66. (Previously Presented) The device of claim 64 wherein the material promoting inflammatory response is a radioactive material.
67. (Cancelled)
68. (Currently Amended) A contraceptive device, comprising:
- a) a tubular body which has a longitudinal axis, which is at least in part configured to be radially expanded about the longitudinal axis within a lumen of a fallopian tube, from a first configuration to a second retained cylindrical tubular configuration having larger transverse dimensions than the first configuration to facilitate securing a least a portion of the tubular body to a wall portion defining at least in part a lumen of the fallopian tube and which has an open framework in the retained expanded configuration facilitating ~~the~~ tissue ingrowth of epithelial cells thereinto; and
 - b) a permeable, fibrous member disposed at least partially within the tubular body, the permeable, fibrous member configured to promote ~~epithelial~~ tissue ingrowth from the wall portion defining at least in part the lumen of the fallopian tube into the permeable, fibrous member.

69. (Previously Presented) The contraceptive device of claim 68 wherein the transverse dimensions of the retained configuration are the same or slightly greater than the lumen of the patient's reproductive system.
70. (Previously Presented) The contraceptive device of claim 68 wherein the fibrous member is coated or impregnated with tissue growth agents.
71. (Previously Presented) The contraceptive device of claim 68 wherein the fibrous member is formed at least in part of strands having transverse dimension of about 0.00025 to about 0.25 mm.
72. (Previously Presented) The contraceptive device of claim 68 wherein the tubular body is self expanding to the second expanded configuration.